



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
-----------------	-------------	----------------------	---------------------	------------------

10/591,500

05/25/2007

Kazuo Tagawa

07481.0053

1464

22852

7590

01/08/2009

FINNEGAN, HENDERSON, FARABOW, GARRETT & DUNNER  
LLP

901 NEW YORK AVENUE, NW  
WASHINGTON, DC 20001-4413

EXAMINER

VASISTH, VISHAL V

ART UNIT

PAPER NUMBER

1797

MAIL DATE

DELIVERY MODE

01/08/2009

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/591,500	<b>Applicant(s)</b> TAGAWA ET AL.	
	<b>Examiner</b> VISHAL VASISTH	<b>Art Unit</b> 1797	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 25 May 2007.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-3 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-3 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)            | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | Paper No(s)/Mail Date. _____                                      |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>See Continuation Sheet</u> .                                  | 6) <input type="checkbox"/> Other: _____                          |

Continuation of Attachment(s) 3). Information Disclosure Statement(s) (PTO/SB/08), Paper No(s)/Mail Date :9/1/2006, 9/16/2008 and 10/23/2008.

## **DETAILED ACTION**

### ***Claim Objections***

1. Claim 1 is objected to because of the following informalities: claim 1 reads, "nitrogen content is nor more than 50 ppm" and should read, "nitrogen content is not more than 50 ppm." Appropriate correction is required.

### ***Claim Rejections - 35 USC § 102***

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claim 1 is rejected under 35 U.S.C. 102(b) as being anticipated by Kunihiro et al., US Patent No. 4,521,296 (hereinafter referred to as Kunihiro).

Kunihiro discloses a high quality refrigerator lubricating oil having an aromatic ring structure (%C<sub>A</sub>) between 10 and 16 (which is within the range from 5 to 25 as recited in claim 1) (Col. 2/L. 18-29 and Col. 3/L. 7-16). The refrigerator lubricating oil of Kunihiro is formed by a hydrogenation process which removes substances responsible for the formation of sludge such as nitrogen (nitrogen content is not more than 50 ppm by mass) (Col. 3/L. 53-61 and Col. 9-10/Table 2).

### ***Claim Rejections - 35 USC § 103***

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and

Art Unit: 1797

the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148

USPQ 459 (1966), that are applied for establishing a background for determining

obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

6. Claims 1-3 are rejected under 35 U.S.C. 103(a) as being unpatentable over

Shimomura et al, US Patent No. 6,231,782 (hereinafter referred to as Shimomura).

Shimomura discloses a refrigerator oil composition comprising, a hydrocarbon oil, an alicyclic polycarboxylic acid ester compound, a phosphorus (as recited in claim 3) and/or epoxy compound and a sulfur compound such as a phosphorothionate (as recited in claim 3) (see Abstract and Col. 2/L. 32-34 and Col. 12/L. 7-20). The hydrocarbon oil of Shimomura can be a mineral oil selected from paraffin or naphthene obtained by employing one or more refining processes such as solvent extraction, solvent dewaxing, catalyst dewaxing hydrofinishing, clay treatment, sulfuric acid washing and of these mineral oils - highly refined mineral oils are preferable for their heat stability. These oils have unsaturation of 10% or less (which overlaps with the range of claim 1) (Col. 3/L. 1-3 and Col. 15/L. 25-27). Based on the disclosure in the instant specification and knowledge to those of ordinary skill in the art at the time of the invention it would have been obvious to use a highly refined mineral oil wherein the

processes described above remove contaminants such as nitrogen and sulfur from the mineral oils (as recited in claims 1 and 2) (Col. 2-3/L. 56- 18).

7. Claims 1-2 are rejected under 35 U.S.C. 103(a) as being unpatentable over Cohen et al., US Patent No. 6,736,991 (hereinafter referred to as Cohen).

Cohen discloses a refrigeration lubricant comprising a naphthenic mineral oil, a hydrofluorocarbon refrigerant and a nonionic surfactant. The naphthenic mineral oils are made by contacting them with sulfuric acid and filtering with either clay or bauxite to reduce sulfur and nitrogen-containing heterocyclic compounds and improve low temperature properties. The sulfur and nitrogen compounds have been reduced such that the total sulfur and nitrogen is at low levels 0.05 wt% (500 ppm or lower) (overlaps with the ranges as recited in claims 1-2) (Col. 2-3/L. 66-12). The %C<sub>A</sub> of the naphthenic mineral oil is 14 which is within the range as recited in claim 1 (Col. 3/L. 30-31).

### ***Conclusion***

8. There were X references disclosed in the PCT search report that was part of the file wrapper to this application that were unused. This is because the references used were sufficient to reject the claims.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to VISHAL VASISTH whose telephone number is (571)270-3716. The examiner can normally be reached on M-R 8:30a-5:30p.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Glenn Caldarola can be reached on (571)272-1444. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 1797

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

VVV

/Glenn A Caldarola/  
Acting SPE of Art Unit 1797